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Please file the attached Response to Restriction Requirement in the application described below:

In re: Chengyan Zhao, et al.

Confirmation No.: 1245

Appl. No.: 10/805,973

Art Unit: 1634

Filed: March 22, 2004

Examiner: Kapushoc, Stephen Thomas

For: METHODS AND COMPOSITIONS FOR  
ANALYZING AHASL GENES

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Attorney's Docket No. 038867/271254

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re:	Chengyan Zhao, et al.	Confirmation No.:	1245
Appl. No.:	10/805,973	Art Unit:	1634
Filed:	March 22, 2004	Examiner:	Kapushoc, Stephen
Thomas			
For:	METHODS AND COMPOSITIONS FOR ANALYZING AHASL GENES		

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**RESPONSE TO RESTRICTION REQUIREMENT**

This is in response to the Office Action dated December 27, 2005, in which the Examiner has required restriction between Group I, namely Claims, 1-31 and Group II, namely Claims 32-41. The Examiner has further restricted examination of both the Group I and II claims to a single *AHASL* gene and the appropriate pair of gene-specific primers for amplification of that gene. Applicants hereby provisionally elect with traverse to prosecute the claims of Group I (Claims 1-31) with respect to *AHASLID* and primer pair SEQ ID NOs: 5 and 7. Applicants expressly reserve the right to file divisional applications or take such other appropriate measures deemed necessary to protect the inventions in the remaining claims.

The Office Action indicates that the Group I claims (claims 1-31) are drawn to methods for detecting *AHASL* alleles and that the Group II claims (32-41) are drawn to nucleic acids. However, Applicants note that of the Group II claims only claim 32 is drawn to a nucleic acid *per se*. Claims 33-41 are directed to kits for performing Applicants' claimed methods wherein the kits comprise nucleic acids that find use as PCR primers.

In addition, the Office Action indicates that a further election of an *AHASL* gene and an appropriate pair of gene-specific primers is required. The Office Action asserts that the

RTA01/2106174v1

Appl No.: 10/805,973

Amdt. dated January 27, 2006

Reply to Restriction Requirement of December 27, 2005

different genes are structurally distinct in that they are composed of unique polynucleotide sequences and therefore would require separate searches.

Applicants respectfully disagree with this view of the Office Action because the *AHSL1A*, *AHSL1B* and *AHSL1D* genes of wheat comprise highly similar nucleotide sequences because they are derived from a common ancestor. Common wheat is an allohexaploid consisting of seven groups of chromosomes, each group containing a set of three homeologous chromosomes belonging to the A, B, and D genomes, derived from a common ancestor. The *AHSL1A*, *AHSL1B* and *AHSL1D* reside within the A, B, and D wheat genomes, respectively. While those of ordinary skill in the art are aware that the *AHSL* genes of wheat share very high nucleotide sequence identity, Applicants provided in the instant application Figure 6 which sets forth the nucleotide sequence identities from pairwise comparisons of the *AHSL* genes from both hexaploid and tetraploid wheat. The nucleotide sequence identities in Figure 6 range from 97.3% to 99.6%.

Given the these very high sequence identities, Applicants submit that a single search for one wheat *AHSL* gene will uncover all relevant sequences and/or references for each of the other wheat *AHSL* genes. Accordingly, the examination of the Group I claims, without the requirement of a further election of a wheat *AHSL* gene and an appropriate pair of gene-specific primers, would not be an undue burden on the Examiner.

In view of the remarks above, Applicants respectfully request that the Examiner reconsider the Restriction Requirement and withdraw the further restriction of the Group I claims to a single wheat *AHSL* gene and an appropriate pair of gene-specific primers.

Should the Examiner have further questions or comments with respect to examination of this case, it is respectfully requested that the Examiner telephone the undersigned so that further examination of this application can be expedited.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those, which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a),

Appl No.: 10/805,973  
Amdt. dated January 27, 2006  
Reply to Restriction Requirement of December 27, 2005

and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

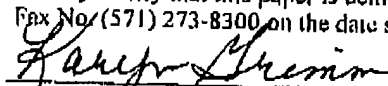


David M. Saravitz  
Registration No. 55,593

CUSTOMER NO. 55392  
ALSTON & BIRD LLP  
Bank of America Plaza  
101 South Tryon Street, Suite 4000  
Charlotte, NC 28280-4000  
Tel Raleigh Office (919) 862-2200  
Fax Raleigh Office (919) 862-2260

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